Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A paired anastomosis device for holding a first vessel together with a second vessel comprising:

first ring means for providing support for a first vessel at a first vessel opening, wherein the first ring means has a first ring opening, and

second ring means for providing support for a second vessel at a second vessel opening, wherein the second ring means has a second ring opening,

wherein the first ring means and the second ring means are configured to hold the first vessel and second vessel together without requiring penetration of at least one of the vessels,

wherein each ring means is ~~adapted~~ configured to expand and contract to enable each respective vessel opening to change in diameter, and

wherein the ring means are configured to be structurally linked in a manner such that the first and second ring means expand and contract in unison and such that the first vessel remains anastomosed to the second vessel at the first and second vessel openings as the first and second ring means expand and contract.

2. (currently amended) The paired anastomosis device of claim 1, further comprising locking means for locking the first ring means and the second ring means together such that the first vessel and the second vessel remain anastomosed together.

3. (currently amended) The paired anastomosis device of claim 2, wherein the locking means comprises guide means for guiding the movement of one ring means relative to the other ring means from a loading position with the first ring means offset from the second ring means to an anastomosis position.

4. (currently amended) The paired anastomosis device of claim ~~2~~1, wherein the first and second ring means are ~~adapted~~ configured to cooperate with attachment actuation means for approximating one of the ring means to the other ring means such that the device is moved from a loading position to an anastomosis position.

5. (currently amended) The paired anastomosis device of claim 1, wherein the first ring means further comprises holding means for holding the first vessel at the first vessel opening, and

wherein the second ring means further comprises holding means for holding the second vessel at the second vessel opening.

6. (currently amended) The paired anastomosis device of claim 5, wherein the holding means of at least one of the rings means comprises anchor means for more securely anchoring a vessel on the holding means.

7. (currently amended) A paired anastomosis device for holding a first vessel together with a second vessel comprising:

a first ring ~~having~~ comprising holding surfaces that define a first ring opening, wherein the holding surfaces are ~~adapted~~ configured to hold a portion of a first vessel defining a first vessel opening such that the first vessel opening is at the first ring opening, and

a second ring ~~having a plurality of~~ comprising holding surfaces that define a second ring opening, wherein the holding surfaces are ~~adapted~~ configured to hold a portion of a second vessel defining a second vessel opening such that the second vessel opening is at the second ring opening,

wherein the first ring and the second ring are configured to hold the first vessel and second vessel together without requiring penetration of at least one of the vessels,

wherein each ring is ~~adapted~~ configured to expand and contract to enable each respective vessel opening to change in diameter, and

wherein the rings are configured to be structurally linked in a manner such that the first and second rings expand and contract in unison

and such that the first vessel remains anastomosed to the second vessel at the first and second vessel openings as the first and second rings expand and contract.

8. (currently amended) The paired anastomosis device of claim 7, further comprising a plurality of guideposts extending from one of the rings and a plurality of guides fixedly connected to the other ring, wherein the guideposts are positioned to slide into the guides in order to guide the rings from a loading position to an anastomosis position.

9. (currently amended) The paired anastomosis device of claim 8, wherein the guides are sized to frictionally engage the guideposts such that the rings are maintained in the anastomosis position after the rings are brought together.

10. (currently amended) The paired anastomosis device of claim 7, wherein one of the rings comprises a plurality of legs with locking extensions and the opposite ring comprises a plurality of legs with slots positioned to receive the locking extensions, such that the rings are maintained in the anastomosis position after the rings are brought together.

11. (currently amended) The paired anastomosis device of claim 7, ~~wherein each vessel has an intimal layer, and~~

wherein the holding surfaces of at least the first ~~each~~ ring are configured ~~positioned~~ to capture vessel tissue in an everted configuration so that when the rings are in an anastomosis position ~~the~~ an intimal layer of the portion of the first vessel defining a first vessel opening contacts ~~the intimal layer of~~ the portion of the second vessel defining a second vessel opening.

12. (currently amended) The paired anastomosis device of claim 7, ~~wherein each vessel has an adventitial layer,~~

wherein the holding surfaces of the first ring contact ~~the~~ an adventital ~~surfaces~~ surface of the portion of the first vessel defining a first vessel opening, and

wherein the holding surfaces of the second ring contact ~~the~~ an adventital ~~surfaces~~ surface of the portion of the second vessel defining a second vessel opening.

13. (currently amended) The paired anastomosis device of claim 7, wherein each ring comprises a plurality of flexible segments.

14. (currently amended) The paired anastomosis device of claim 13, wherein each flexible segment comprises two adjoining arms in a V-shaped configuration.

15. (currently amended) The paired anastomosis device of claim 13, wherein each flexible segment has a configuration that is ~~selected from the group consisting~~ at least one of a U-shaped configuration, a quadrilateral shaped configuration, a circular configuration, an elliptical configuration, a spiral-shaped configuration, and an oval-shaped configuration.

16. (currently amended) The paired anastomosis device of claim 13, wherein the holding surfaces of each ring are holding tabs.

17. (currently amended) The paired anastomosis device of claim 16, wherein each flexible segment of the plurality of flexible segments of each ring is adjoined to an adjacent flexible segment by a connecting joint, wherein each flexible segment of each ring comprises a flexible segment joint, wherein the holding tabs of the first ring extend from the connecting joints, wherein the holding tabs of the second ring extend from the flexible segment joints.

18. (currently amended) A paired anastomosis device for holding a first vessel together with a second vessel comprising:

first ring means for providing support for a first vessel at a first vessel opening, wherein the first ring means has a first ring opening, and

second ring means for providing support for a second vessel at a second vessel opening, wherein the second ring means has a second ring opening,

wherein the first ring means and the second ring means are configured to hold the first vessel and second vessel together without requiring penetration of at least one of the vessels;,

wherein each ring means is ~~adapted~~ configured to be in a compressed position as the first vessel and second vessel are anastomosed together such that each respective ring opening and respective vessel opening have an initial diameter, and

wherein at least one ring means is ~~adapted~~ configured to radially expand to a deployed position after the first vessel and second vessel are anastomosed together such that each ring means and vessel opening has a greater diameter than the initial diameter of each respective ring means and vessel opening.

19. (currently amended) A paired anastomosis device for holding a first vessel together with a second vessel comprising:

a first ring ~~having~~ comprising holding surfaces that define a first ring opening, wherein the holding surfaces are ~~adapted~~ configured to hold a portion of a first vessel defining a first vessel opening such that the first vessel opening is at the first ring opening, and

a second ring ~~having~~ comprising a plurality of holding surfaces that define a second ring opening, wherein the holding surfaces are ~~adapted~~ configured to hold a portion of a second vessel defining a second vessel opening such that the second vessel opening is at the second ring opening,

wherein the first ring and the second ring are configured to hold the first vessel and second vessel together without requiring penetration of at least one of the vessels~~;~~,

wherein each ring is ~~adapted~~ configured to be in a compressed position as the first vessel and second vessel are anastomosed together such that each respective ring opening and respective vessel opening have an initial diameter, and

wherein at least one ring is ~~adapted~~ configured to radially expand to a deployed position after the first vessel and second vessel are anastomosed together such that each ring and vessel opening has a

greater diameter than the initial diameter of each respective ring and vessel opening.

20. (currently amended) A paired anastomosis device for holding a first vessel together with a second vessel comprising:

a first ring ~~having~~ comprising a plurality of holding surfaces that define a first ring opening, wherein the holding surfaces are ~~adapted~~ configured to hold a portion of a first vessel defining a first vessel opening such that the first vessel opening is at the first ring opening,

a second ring ~~having~~ comprising a plurality of holding surfaces that define a second ring opening, wherein the holding surfaces are ~~adapted~~ configured to hold a portion of a second vessel defining a second vessel opening such that the second vessel opening is at the second ring opening,

wherein the first ring and the second ring are configured to hold the first vessel and second vessel together without requiring penetration of at least one of the vessels~~;~~,

wherein each ring comprises a plurality of flexible segments from which the respective holding surfaces extend, and

guides positioned to provide guided coaxial movement of the rings relative to each other so that the rings can be moved from a loaded position, with the first

ring offset from the second ring, to an anastomosis position, with the first vessel ~~is~~ anastomosed to the second vessel at the first and second vessel openings,

wherein the plurality of flexible segments of each ring are ~~adapted~~ configured to enable each respective ring opening and respective vessel opening to change in diameter as each ring expands and contracts in response to changes in fluid pressure.

21. (new) The paired anastomosis device of claim 5, wherein the holding means of the first ring means and the holding means of the second ring means are in an interdigitated configuration.

22. (new) The paired anastomosis device of claim 5, further comprising locking means for locking the first ring means and the second ring means together such that the first vessel and the second vessel remain anastomosed together, and wherein the locking means are separate structures relative to the holding means of the first ring means and the holding means of the second ring means.

23. (new) The paired anastomosis device of claim 7, wherein the holding surfaces of the first ring and the holding surfaces of the second ring are in an interdigitated configuration.

24. (new) The paired anastomosis device of claim 8, wherein the guideposts, the guides, the holding surfaces of the first ring, and the holding surfaces of the second ring are separate structures relative to each other.

25. (new) The paired anastomosis device of claim 18,

wherein the first ring means further comprises holding means for holding the first vessel at the first vessel opening, and

wherein the second ring means further comprises holding means for holding the second vessel at the second vessel opening, and

wherein the holding means of the first ring means and the holding means of the second ring means are in an interdigitated configuration.

26. (new) The paired anastomosis device of claim 25, further comprising locking means for locking the first ring means and the second ring means together such that the first vessel and the second vessel remain anastomosed together, and

wherein the locking means are separate structures relative to the holding means of the first ring means and the holding means of the second ring means.

27. (new) The paired anastomosis device of claim 19, wherein the holding surfaces of the first ring and the holding surfaces of the second ring are in an interdigitated configuration.

28. (new) The paired anastomosis device of claim 27, further comprising a plurality of guideposts extending from one of the rings and a plurality of guides fixedly connected to the other ring, wherein the guideposts are positioned to slide into the guides in order to guide the rings from a loading position to an anastomosis position, and

wherein the guideposts, the guides, the holding surfaces of the first ring, and the holding surfaces of the second ring are separate structures relative to each other.

29. (new) The paired anastomosis device of claim 20, wherein the holding surfaces of the first ring and the holding surfaces of the second ring are in an interdigitated configuration.

30. (new) The paired anastomosis device of claim 20, wherein the guides, the holding surfaces of the first ring, and the holding surfaces of the second ring are separate structures relative to each other.

31. (new) A method for anastomosing a first vessel together with a second vessel, the method comprising:

obtaining a first ring, wherein an end of a first vessel defining a first vessel opening is held on the first ring;

positioning, on a second ring, a portion of a second vessel defining a second vessel opening of the second vessel; and

locking the first and second rings together such that the first vessel is in fluid communication with the second vessel,

wherein each ring has a ring opening and the diameter of each ring opening varies as the rings expand and contract in response to changes in fluid pressure, and

wherein each ring is capable of expanding and contracting before the rings are locked together.

32. (new) The method of claim 31, wherein the first ring and the second ring are locked together in a configuration such that the first vessel and the second vessel contact each other in an interdigitated configuration.

33. (new) The method of claim 31, wherein the first ring has one or more holding surfaces for holding the end of the first vessel defining the first vessel opening, and wherein the second ring has one or more holding surfaces for holding the portion of the second vessel defining the second vessel opening.

34. (new) The method of claim 33, wherein one or more of the holding surfaces have anchor means for more securely anchoring the vessels onto the holding surfaces.

35. (new) The method of claim 31, wherein the first ring has a plurality of guideposts extending therefrom and the second ring has a plurality of guides, and wherein the guideposts are positioned to slide into the guides as the first and second rings are brought together.

36. (new) The method of claim 35, wherein the guides are sized to frictionally engage the guideposts such that the rings are maintained in the anastomosis position after the rings are brought together.

37. (new) The method of claim 31, wherein each ring comprises a plurality of flexible segments.

38. (new) The method of claim 37, wherein each flexible segment is adjoined to an adjacent flexible segment by a connecting joint, wherein each flexible segment has a flexible segment joint, wherein the holding tabs of the first ring extend from the connecting joints, and wherein the holding tabs of the second ring extend from the flexible segment joints.

39. (new) The method of claim 31, wherein the second vessel is positioned on the second ring while simultaneously locking the first and second rings together.

40. (new) The method of claim 31, wherein the step of positioning the second vessel is achieved in a manner such that the portion of the second vessel defining the second vessel opening is at least partially everted.

41. (new) The method of claim 31, wherein the first ring and the second ring are locked together in a configuration such that the first vessel and the second vessel directly contact each other without requiring penetration of at least one of the vessels.

42. (new) A method for anastomosing an end of a first vessel to a side of a second vessel, the method comprising:

obtaining a first ring, wherein an end of a first vessel defining a first vessel opening is held on the first ring;

positioning, on a second ring, a portion of a second vessel defining a second vessel opening of the second vessel at the side of the vessel; and

locking the first and second rings together such that the first vessel opening and the second vessel opening are in fluid communication,

wherein each ring has a ring opening and the diameter of each ring

opening varies as the rings expand and contract in response to changes in fluid pressure, and

wherein each ring is capable of expanding and contracting before the rings are locked together.

43. (new) The method of claim 42, wherein the first ring and the second ring are locked together in a configuration such that the first vessel and the second vessel contact each other in an interdigitated configuration.

44. (new) The method of claim 42, wherein the first ring has one or more holding surfaces for holding the end of the first vessel defining the first vessel opening, and wherein the second ring has one or more holding surfaces for holding the portion of the second vessel defining the second vessel opening.

45. (new) The method of claim 42, wherein one or more of the holding surfaces have anchor means for more securely anchoring the vessels onto the holding surfaces.

46. (new) The method of claim 42, wherein the first ring has a plurality of guideposts extending therefrom and the second ring has a plurality of guides, and wherein the guideposts are positioned to slide into the guides as the first and second rings are brought together.

47. (new) The method of claim 46, wherein the guides are sized to frictionally engage the guideposts such that the rings are maintained in the anastomosis position after the rings are brought together.

48. (new) The method of claim 42, wherein each ring comprises a plurality of flexible segments.

49. (new) The method of claim 48, wherein each flexible segment is adjoined to an adjacent flexible segment by a connecting joint, wherein each flexible segment has a flexible segment joint, wherein the holding tabs of the first ring extend from the connecting joints, and wherein the holding tabs of the second ring extend from the flexible segment joints.

50. (new) The method of claim 42, wherein the second vessel is positioned on the second ring while simultaneously locking the first and second rings together.

51. (new) The method of claim 42, wherein the step of positioning the second vessel is achieved in a manner such that the portion of the second vessel defining the second vessel opening is at least partially everted.

52. (new) The method of claim 42, wherein the first ring and the second ring are locked together in a configuration such that the first vessel and the second vessel directly contact each other without requiring penetration of the second vessel.